Seattle's Community Solar Program: Program Summary/Abstract
US Department of Energy
Recovery Act- Solar Market Transformation
Topic 1: Solar America Cities Special Projects

Applicant: City of Seattle

Project Title: Seattle's Community Solar Program

Project Director: Robert Balzar, Director Conservation Resources Division, Seattle City Light

Project Objectives: The City of Seattle is requesting ARRA grant funds in response to Topic 1 of the Department of Energy's FOA Number DE-FOA-0000078, Solar Market Transformation to develop a world-class Community Solar Program. The City intends to significantly transform the market for small solar customers by:

i. Developing a financial and ownership model that addresses all legal, technical and logistical requirements to community solar;

ii. Installing the first Community Solar Project in Seattle (estimated 30-60 kW);

iii. Marketing the program and enrolling participants; and

iv. Establishing a Solar Revolving Fund that will re-invest revenue generated by the first Community Solar Project into future Community Solar Projects and other city-owned solar energy systems.

Description of Project: There are many barriers to small-scale solar adoption by individual customers in Seattle, where available hydro-based electric power is cheap, solar access is limited for many, and installation costs are high. Seattle proposes to overcome these barriers by launching a Community Solar project in Seattle. The Solar Market Transformation award will fully fund the first Community Solar Project construction, a 30-60 kW photovoltaic facility.

Special Project Funds applied to the first Community Solar installation will be recouped through Community Solar participation: customers' purchase of "shares" will provide ongoing revenue that a Solar Fund will use to seed future Community Solar or other city-owned solar projects. These projects will directly result in the expanded capacity of solar energy in Seattle and our residents' access to it.

Impacts of Project: Hundreds to thousands of Seattle residents that would otherwise have significant barriers to solar power access will be able to participate in Seattle's Community Solar Project, thereby increasing awareness and familiarity with solar energy.

Major Participants: Seattle City Light (municipal utility); Office of Mayor Greg Nickels; Northwest Sustainable Energy for Economic Development; Pike Place Market Preservation and Development Authority.

Seattle's Community Solar Program

The City of Seattle's Proposal
to the
US Department of Energy
Recovery Act- Solar Market Transformation:
Topic 1: Solar America Cities Special Projects

Funding Opportunity Number: DE-FOA-0000078
CFDA Number: 81.117

Submitted: July 29, 2009

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1. Project Introduction & Objectives

Seattle is proud to be among the first 25 Solar America Cities. Despite a climate rumored to be excessively rainy, Seattle has demonstrated that solar energy does indeed work here. While it is true that a solar cell in Seattle will not produce as much energy as a solar cell in a city like Phoenix, the fact remains that the greatest barriers to widespread solar energy use and deployment are factors related to infrastructure, awareness, economics, and planning - not climate. In fact, according to the National Renewable Energy Laboratory's PV Watts calculator, solar radiation in Seattle is better than that of any city in Germany, yet Germany is one of the world's leaders in solar energy use.

Seattle's solar resource is harnessed by over 180 PV installations serving schools, parks, residences and commercial buildings. With current PV capacity in Seattle adding up to over 500 kW, an estimated 560 Megawatt-hours of clean solar electricity are produced annually. Seattle's solar motto is: Solar Works in Seattle!

In its 2008 Solar America Cities application, Seattle identified four key barriers to solar: City Planning, Economics, Interconnection, and Education/Awareness. Under economic or financial barriers the specific hurdles identified for Seattle's residential customers included the *upfront capital cost* to installing solar on their own homes and having *access* to a space with a strong solar resource. Seattle's application for the Solar Market Transformation Funding Opportunity focuses on launching a city-administered **Community Solar Program** that will address both the capital cost and access barriers.

Solar, once referred to as "boutique" is no longer just for the wealthy homeowner who happens to have the perfect rooftop. Community members are looking for new ways to use or invest in solar energy and to capture economies of scale while also meeting individual energy demand. The concept of community solar has become a hot topic both regionally and nationally, and many creative models are emerging that allow for shared ownership and investment. These models respond to a widening demand for solar energy, bringing the benefits to renters, those with shaded or otherwise unsuitable sites, and those who are willing to invest, but at a lower cost entry point than is standard for individual solar systems (hundreds of dollars instead of tens of thousands of dollars).

As part of Seattle's Solar America City work, we have the possibility of developing a community solar project that would *increase access* to solar electricity for Seattle City Light customers now and provide a revenue source for additional solar projects in the future.

What is Community Solar?

Community Solar is commonly defined to mean a solar electric system that, through a voluntary program, provides power and/or financial benefit to multiple entities.

In a typical residential PV installation, a homeowner determines if they have an adequate installation site (free of shade, appropriate roof orientation, good roof condition, etc,) and then contracts to have a system installed. The average system installed in Seattle is 2-3 kW and costs $16,000 - $30,000. Once installed the system will produce electricity when the sun is shining and if the homeowner is not home to use the electricity, it will flow back out through their utility meter to the grid. The process of the utility meter spinning backwards, called net metering, gives the homeowner credit for any solar electricity that flows onto the grid. Homeowners then take advantage of that credit at night and on cloudy days when they pull electricity from the utility grid. This solar ownership model works for some, but definitely not all Seattle residents.

The vision of a community solar project for Seattle takes the P-patch or community garden concept and applies it to solar energy. In this design, instead of lots of small individual systems, one centrally-located large installation is sited on public property, and many community members buy "shares" of the system. The participants generally choose to be involved in the program because they want to install solar but cannot on their building either because they cannot afford a full system, they do not own the building or because they have shading or other issues that would affect a system's production. The Community Solar project is sited using best siting practices to maximize production and designed to allow participation at lower cost-entry levels than if an individual were to install a full system on his or her own building. Participants receive some financial credit for the power produced by their "share" of the system and may also receive (especially in Washington State) a state incentive.

Unlike standard incentive programs which pay homeowners to install PV, a Community Solar Program provides no subsidy to the customer. Instead the program eliminates the barrier of the high upfront cost by allowing customers to buy-in at lower levels, i.e. a fraction of a system versus an entire system. In a Community Solar Program even though a customer pay the same cost-per-watt or cost-per-kilowatt-hour that they would have if they installed on their own home, they'll be able to start their investment with just a fraction of a system.

While there are many valid definitions of Community Solar, this application focuses on projects that a Municipal Utility could pursue in order to ***increase access*** to solar energy and to ***reduce upfront costs*** for participants, without compromising the Utility's required resource purchasing practices or providing a subsidy to customers.

Other goals that may be met by a Community Solar Program include the following:

- Providing local jobs and related economic benefit
- Reducing costs through economies of scale
- Taking advantage of best siting opportunities
- Generating community enthusiasm and pride
- Increasing public knowledge about solar energy
- Connecting with hard-to-reach consumers
- Removing home/building ownership as a criteria for participation in solar
- Testing new models of marketing, project financing, and service delivery

Objectives

The City of Seattle plans to use the Solar Market Transformation funding to develop a world-class Community Solar Program that can be replicated by other cities. The City will do so by:

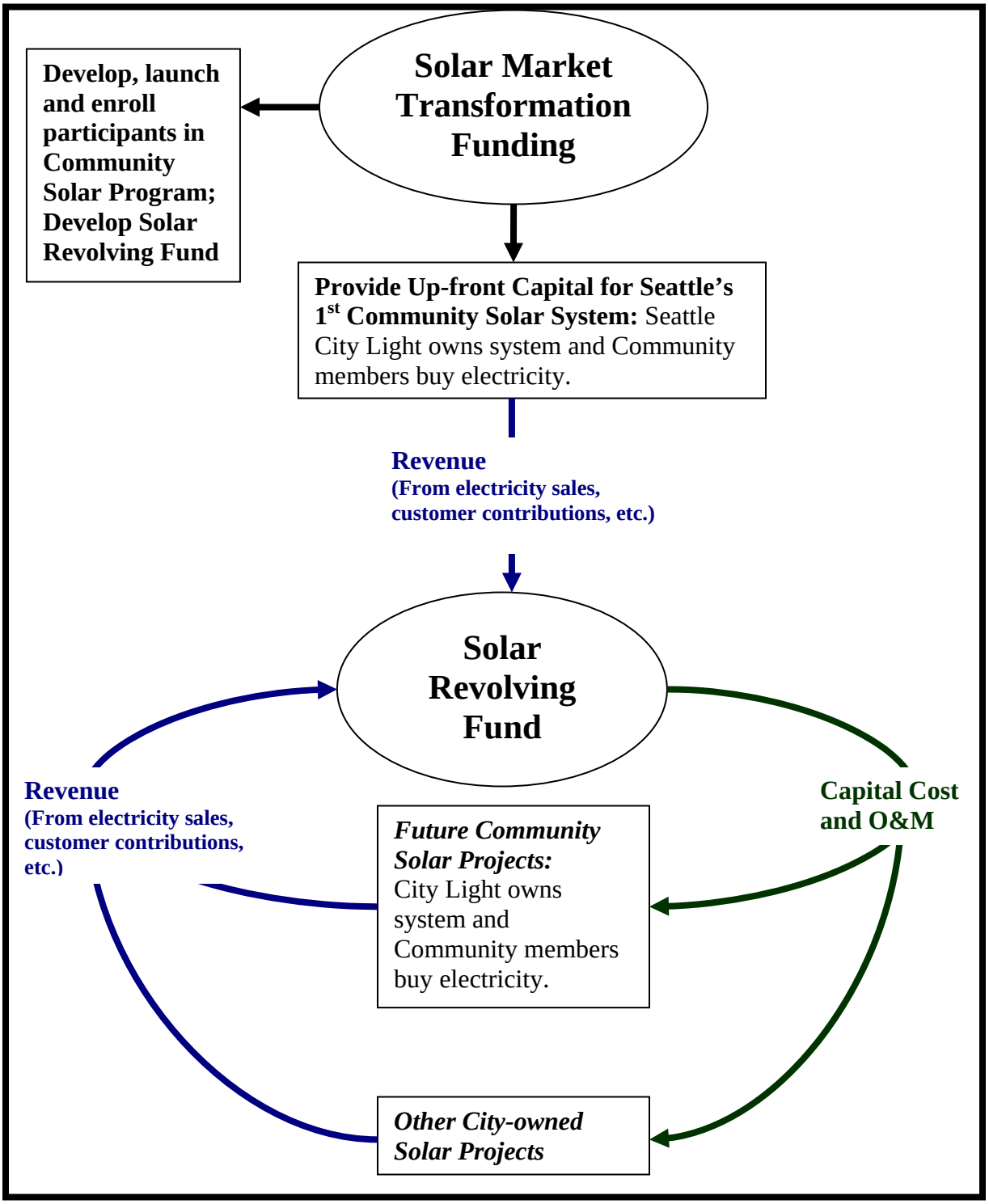
i. Developing a financial and ownership model that addresses all legal, technical and logistical requirements to community solar;

ii. Installing the first Community Solar Project in Seattle (estimated 30-60 kW);

iii. Marketing the program and enrolling participants; and

iv. Establishing a Solar Revolving Fund that will re-invest revenue generated by the first Community Solar Project into future Community Solar Projects and other city-owned solar energy systems.

Community Solar Program Financial Flow Diagram



2. Criterion 1: Project Description

Key Barriers & Project Approach

For City Light's residential customers, access to solar energy is limited to those that own their own homes, have sites with the necessary unshaded space, and can afford the high upfront cost for a solar

system. The majority of Seattle's existing 180 photovoltaic installations are therefore on single-family homes, with about a dozen on commercial buildings. Half of Seattle's residential population is renters who cannot install solar on the buildings they rent.

Access to a shade-free solar resource is also an issue in Seattle. The City has a strong Growth Management Act that supports increasing urban density in order to reduce sprawl and improve the walkability of neighborhoods in order to reduce traffic congestion and the resulting climate change impact. The increased density results in more in high rise multi-family units and commercial facilities, many of which shade their neighboring properties.

Additionally, Seattle recently launched a *re-Leaf* campaign to significantly increase the percentage of urban tree canopy. The planting over the next 20 years of hundreds of thousands more trees (required to reach a 30% canopy coverage goal) is good for the City but, will increase shading on properties.

In order to overcome these significant limitations to access, Seattle will design a Community Solar Program for voluntary participation by residents. Some next steps have been outlined, but specific requirements remain. In order to launch a Community Solar Program the following needs must be addressed:

- Market research to determine the program design that will maximize Seattle residents' participation (this need is being addressed with market research conducted as part of the current SAC grant from DOE.)
- Legal consultation on the ownership and financial structure of a project in order to comply with all state and federal regulations including the securities acts (this barrier is also being at least partially addressed through the current SAC grant).
- Modification of Seattle City Light's current billing system policies and procedures as it relates to providing Community Solar participants with the WA State Production Incentive, on-bill credits for the power produced by their "share" of the project, and documentation of the monthly/annual production of their "share".
- Many of the project elements could vary based on customer interest, Utility preferences, and legal restrictions including:
    - Participation fees – Do participants pay once or is there an ongoing fee payment structure?
    - Electricity and Renewable Energy Credit ownership: Who owns the energy and non-energy attributes (renewable energy credits or RECs) associated with each kilowatt-hour generated by the project?
    - Virtual net-metering – How do participants get credited for the electricity produced by the project? Do they receive a credit on their utility bill for a calculated percentage of the project's actual metered production, or a percentage of expected production, or is there another mechanism?
    - Enrollment – Will the project accept additional participants after construction has been completed, or do participants have only one opportunity to enroll? Does enrollment prior to construction determine the project size, or can the project be built to meet future demand? What happens if the program is oversubscribed, how would participants be chosen?
    - Transitions – What happens when participants move? Are they able to sell their "shares" to other community members? How are "shares" transferred?

- Formation of an operating and maintenance plan. Seattle City Light will own the Community Solar project and have responsibility for maintaining a well functioning system. City Light is very familiar with owning and operating generation facilities and has the staff knowledge to manage such systems, but a plan must be developed that will detail roles, responsibilities, maintenance schedules, etc., and this will involve cross-divisional staff time and resources.

The Seattle team will rely on staff resources at City Light and sister departments as well as its consultant Northwest SEED (currently assisting with many activities under the Solar America City award, with emphasis on community outreach, community solar research, and project management) to address these needs. Seattle's efforts will result in valuable lessons-learned that other cities will be able to use in starting their own Community Solar Programs.

Continuing the Program after DOE Funding

To the extent that funds are required in order to overcome pre-construction project barriers, the lessons learned (whether legal, technical, or logistical in nature) will be applicable to any future Community Solar project or other creative financing mechanism for solar in Seattle. To the extent that funds are applied toward the construction of a project with the plan in place to recoup those costs through voluntary customer participation, the funds then act as seed money for the Solar Revolving Fund to develop numerous future community solar energy and other city-owned solar projects. The momentum created could foster community solar project development within each of Seattle's many distinct neighborhoods or even projects in Eastern Washington (which receives about 20% more sun than Seattle) once residents are familiar with the model.

Replication

This project is highly replicable within other jurisdictions. There is rapidly growing interest in Community Solar, and it is likely that the lessons learned through this project will be widely anticipated by other cities. Many cities, like Seattle, struggle to balance their support of urban density, tree canopy goals, and solar. Community Solar offers one potential solution to this balancing act. Furthermore, given Seattle's reputation for cloudy weather, a successful Community Solar Program here will help other cities make the case that community solar can work in their region as well.

Leading up to this request, Seattle has surfaced as a leader in the research and analysis of potential community solar models (as demonstrated by Seattle City Light contractor and SAC partner, Northwest SEED's, presentation at the Annual Solar America Cities conference in San Antonio, TX, their presentation at NextGen's "Community Energy Roadmap for the Northwest" conference and by the much anticipate *Community Solar Guide* due to be published by SAC partner, the Bonneville Environmental Foundation, and Northwest SEED in Fall 2009). While there are a few Community Solar projects already employed in the US, the existing models leave room for improvement in a changing landscape of barriers and opportunities. This is especially true in the areas of legal structure, access to state incentive programs, and program designs that can be easily understood by potential customers.

Impact on Long Term Goals

Seattle has a variety of public goals which will be supported by the creation of a Community Solar Program and Solar Revolving Fund.

The Community Solar Program builds on the clean energy commitments of the Mayor's Climate Initiative, including his support to increase energy efficiency in all existing buildings by 20% and to require all major renovation or new construction to meet the Architecture 2030 Challenge (which calls for all new buildings to have carbon neutral operation by 2030).

The Community Solar Program will continue Seattle City Light's tradition of providing carbon-neutral electricity to its customers. In addition, the first Community Solar project along with future systems funded through the Solar Revolving Fund have the potential to help Seattle City Light meet its renewable energy requirements under I-937, the state's Renewable Portfolio Standard. Under the rules for I-937, utilities can count double any renewable energy credits produced by distributed generation projects under 5 MW.

Building on Solar America City Award & Utilization of Project Funds

Under Seattle's Solar America City award the following core activities built a solid foundation for the development of a Community Solar Program:

- Detailed research and evaluation of six nationally existing Community Solar Programs (summarized in a 20 page report);
- Customer market research of Seattle residents to determine an ideal program design/ business model (survey and focus groups to be conducted 4th Quarter 2009 under Technical Assistance portion of award); and
- A legal memo counseling on important considerations for a Community Solar Program's design as it relates to securities law.

However the original award did not include sufficient funding to fully develop a business model to work with all critical internal staff to create the appropriate accounting and tracking systems, or provide seed funding for the first Community Solar project. The Solar Market Transformation funding will take off from where the Solar America City award left off and turn the Community Solar Program from concept into reality.

The City proposes a two-year $600,000 total project budget. We are requesting $300,000 from DOE to support our project. At least another $300,000 will be provided by project partners who have committed to the following cost-share:

Organization	Amount	% of Total Project Cost	Type of Cost Share
Seattle City Light	$265,000	44%	cash, services
Northwest SEED	$10,000	2%	services
Pike Place Market	$25,000	4%	services
Total Cost Share	**$300,000**	**50%**	

The Community Solar Program work plan and budget outline the tasks to be accomplished, team roles and responsibilities, and funding allocation. Over eight quarters, the project funds will be utilized on the following tasks:

Task 1: Develop program design (15% of total project cost)

- Draft business model
- Legal consult on program design and contract language
- Obtain City Council support for the program and the creation of a Community Solar Program ordinance
- Work with inter-divisional team at City Light to develop appropriate billing, tracking, and WA state incentive payment systems for Community Solar Program participants

Task 2: Install First System (62% of total project cost)

- Finalize system site location selection
- Negotiate rooftop lease and O&M agreements
- Execute City Light standard procurement process for purchasing equipment[1]
- Finalize equipment and contractor selection
- Install first Community Solar system
- Install permanent signage and educational display

Task 3: Market Program and Enroll Participants (8% of total project cost)
- Develop marketing materials and web presence
- Conduct workshops on Community Solar
- Officially launch program to customers and open enrollment
- Maintain on-going participant relationships

Task 4: Solar Revolving Fund (3% of total project cost)
- Develop policies and procedures for Solar Revolving Fund (ex. Accounting System)
- Develop criteria for use of Fund revenues

Task 5: Project Oversight and Reporting (12% of total project cost)
- Oversee all team partners, coordinate and lead project meetings, manager project budge
- Prepare and submit project reports in accordance with grant requirements
- Participate in peer exchange opportunities/project replication with other Solar America Cities

3. Criterion 2: Project Implementation Plan

Task 1: Develop Program Design

The focus of Task 1 will be to work through all the technical, legal, and logistical requirements and hurdles, and to factor in consumer interest, to create a strong business model. The business model will include the flow of funds for the program as a whole, the Revolving Fund, and a pro-forma for each Community Solar Installation that demonstrates the payments by and financial return to participants including leveraged state incentives. Seattle City Light's Conservation Division will take the lead on this effort and work closely with other divisions including, but not limited too, Customer Care, Accounting, IT, Legal Affairs, Utility Support Services and Power Management. Additionally, Seattle City Light will contract with Northwest SEED to provide guidance on best practices in Community Solar Program design.

Task 2: Install 1st System

Task 2 will focus on system design, bid solicitation, and contractor, system, and site selection. Multiple potential sites for Seattle's first Community Solar Project have been proposed including:

- Pike Place Market: The most popular tourist destination in Seattle receiving over 10 million visitors annually and owned and operated by the Pike Place Market (PPM) Preservation & Development Authority. PPM includes multiple potential buildings include one that houses the PPM Clinic and Food Bank.

[1] Seattle City Light's procurement process will includes development of a Request For Proposals (RFP) that meets all ARRA requirements (including but not limited to the Davis-Bacon and Buy American requirements), publicity of the RFP, evaluations of the proposals using predetermined criteria and the City's policies, negotiations with selected vendor, and formalization of contract.

- Rainier Beach Community Center: Owned and operated by Seattle's Dept. of Parks and Recreation, the new center will be built in 2010 to LEED gold standards will be located in one of Seattle's most ethnically diverse neighborhood.
- Other potential sites (suggested by their facilities managers) include: City of Seattle City Hall, Seattle City Light's South Service Center, other Dept. of Parks and Recreation's Community Centers, and other City of Seattle Facilities.

Seattle City Light will use its standard procurement process to select a contractor and a project proposal. The final site selection will be made based on criteria related to visibility, ease/cost of installation, production potential (in kilowatt-hours), maintenance and access agreements, and any necessary building upgrades. Seattle City Light will work with partner Pike Place Market, as well as representatives from Seattle's Dept. of Parks, and Dept. of Fleets and Facilities to select the site and create a site selection process for future sites.

Task 3: Market Program and Enroll Participants

Seattle City Light has a history of offering its customers opportunities to participate in voluntary programs. We will maximize our internal marketing expertise to create easy to understand and educational marketing materials both in print and on the web. Additionally we will provide public workshops as an opportunity for community members to ask questions in person. Finally we will create a plan to maintain regular contact with Community Solar Program participants. This plan may include regular email updates, a newsletter specifically focused on the Program, invitations to special solar events, or other means of keeping the participants informed and involved in the Program. Seattle City Light will act as lead on this Task and contract with Northwest SEED to help on outreach activities such as the public workshops.

Task 4: Develop Solar Revolving Fund

The development of the Solar Revolving Fund will require collaboration with multiple divisions within Seattle City Light in order to create the appropriate accounting and tracking systems. Subtasks needing to be addressed include allocating the appropriate budget authority, developing the policies and procedure for use of the funds and creating a regular reporting mechanism for City Light management and Community Solar Program participants. Seattle City Light will also work with the Dept. of Parks, and Dept. of Fleets and Facilities to create a selection process for future sites. Future project could be located in any of Seattle's diverse neighborhoods and City Light will need to develop a mechanism for involving neighborhoods in the site nomination and selection process.

Task 5: Project Oversight and Reporting

The Seattle team has set aside resources for overall project management to ensure that the Community Solar Program's goals are met on time and within budget. Northwest SEED will assist the City with day to day project coordination, project meetings, budget management, and reporting administration. Northwest SEED has a proven track record managing federal grants and muti-year projects. Their expertise will ensure that project objectives and goals are met and that the project is in compliance with grant requirements. The team will also participate in peer exchange/project replication opportunities with other WA and Solar America Cities.

Potential Barriers and Strategies for Mitigating Risk

Two key barriers to the creation of a successful Community Solar Program were identified. The first identified barrier relates to the intersection of the technical/ legal requirements for the Community Solar Program with the public preference on program design. The customer market research that will be conducted in 4th Quarter 2009 under the Solar America City award will give us an idea of the type of

program design that our customers want. The challenge may come in matching this design with the technical and legal design requirements (especially around the issue of Securities and Exchange Commission regulations). We will work with our contractor at Northwest SEED to maximize the number of potential program designs and to alert research participants to potential pitfalls in order to get their input based on the legal ability to do a program.

The second is that Seattle's Community Solar Program will be one of the first to try to leverage the state's Renewable Energy Production Incentive for Community Solar Projects. It is unclear at this point if participants in utility-owned Community Solar projects are eligible for state incentives, and if so, how the payments will be calculated. Our strategy for mitigating this risk is to work with the Dept. of Revenue in their rule making process to clarify the eligibility of participants in a utility-owned Community Solar project and to make the incentive approval and payment process as straight-forward as possible. While participants' access to the State incentive would certainly increase their financial return, the City of Seattle's commitment to establishing a fund and installing the first system will not be impacted by the outcome of the state's process.

Key Milestones and Decision Points

Milestone #1: Recommendation on Community Solar Program business model
At this point the Seattle City Light Team along with Northwest SEED will have consulted the results of the customer market research, the technical requirements for a system, and the legal requirements and will be ready to present the City Light management with a recommended program model.

Milestone #2: Obtain City Council endorsement of Community Solar Program
In order to implement a Community Solar Program, City Council will need to support the program and issue an ordinance creating the program.

Milestone #3: Execute City Light standard procurement process for 1st Community Solar project
Typically for this size project City Light issues a Request for Proposals which results in bid proposals for the equipment and installation of the system.

Milestone #4: Completion of the installation of 1st Community Solar project
This milestone will be celebrated with a public event to which press, project partners and all of the community solar participants (if participants have been enrolled at this time- see Milestone #6) are invited.

Milestone #5: Formal accounting system established for the Solar Revolving Fund
This milestone is critical for assuring that the revenues generated by the first Community Solar projects can help fund future Community Solar and other public facility solar projects.

Milestone #6: Official launch of program and opening of enrollment to participants
In order to reach this milestone, City Light must have publicly advertised the program and have the internal processes established to enroll customers.

Decision Point #1: Business model selection
After weighing multiple different potential program designs, the City Light team will need to select the model that they believe best meets the legal and technical requirements while appealing to customer demand.

Decision Point #2: Site selection
The City Light team along with our partners will need to choose the best location for the 1st Community Solar project in Seattle.

Decision Point #3: Determine criteria for use of Solar Revolving Fund
The City Light team will need to determine when, where, and how seed funds from the Solar Revolving Fund will be used for future projects.

4. Criterion 3: Roles, Responsibilities, Capabilities, Knowledge and Experience

There are three organizations with the City on the formation of a Community Solar Program: Seattle City Light, Northwest SEED, and Pike Place Market Preservation and Development Authority. In addition the following City Departments will provide assistance as needed to make the project a success: Department of Parks and Recreation, Department of Fleets and Facilities, and Department of Planning and Development.

Details on each organization, roles, responsibilities and qualifications of key personnel follow. Please refer to the Resume.pdf file for further detail on key personnel qualifications.

Seattle City Light
Seattle City Light, Seattle's 107 year old municipal utility, will contribute the largest portion of match funds for the this project, act as lead on all tasks, and have primary financial and reporting responsibilities. In addition Seattle City Light will contract with Northwest SEED for assistance on the tasks related to program development, outreach, and grant reporting.

City Light Key Personnel:

- Robert Balzar, Director of Conservation Resources Division
- Michael Little, Energy Planning Supervisor
- Leslie Brazeau, Marketing Manager
- Meg Gluckman, Solar America Cities Coordinator

Bob Balzar has worked in the areas of conservation, efficiency, and renewable energy for more than thirty years. Bob's experience in solar energy specifically includes development and management of Nevada's SolarGenerations and Green Power tariff programs (see resume for greater detail). His key responsibility with the Solar Market Transformation grant will be oversight and reporting to City Light and City executives.

Michael Little has been with Seattle City Light for fourteen years and has significant experience in technical and policy issues facing the region's electricity supply as well as program development, implementation, and management skills. Michael was actively engaged in the rulemaking process for Washington State's Renewable Portfolio Standard and Renewable Energy Production Incentive Program and has financial responsibility for the Solar America Cities grant. For the Solar Market Transformation grant, Michael will be actively involved in all tasks as an advisor and assist in building the cross-divisional and –departmental relationships necessary to bring this program to fruition.

Leslie Brazeau has over two decades worth of direct-to-customer marketing and brand development. She is skilled at developing a strong web presence and effective product marketing plans. Her role with this grant will be to develop the brand and marketing strategy for the Community Solar Program. She will be responsible for creating a print, media, and web presence for the program.

Meg Gluckman has worked in the field of renewable energy for the past 8 years. She brings to City Light her direct experience in designing and installing PV and solar thermal systems and conducting community

outreach on conservation and renewable energy. Meg manages the Solar America City grant for Seattle and plays a key coordination role in the work completed under the grant, including the drafting of a 20 MW interconnection standard, the training of over 100 electrical inspectors and utility staff in the National Electric Code as it relates to solar, and in the public solar workshops attended by over 700 Seattle residents. Meg will act as primary staff on the Solar Market Transformation Grant, working on all tasks, and holding responsibility for the Seattle team's meeting of all milestones in a timely and cost-effective manner.

Northwest SEED

Northwest SEED will contract with Seattle City Light to assist with the Community Solar Program design, developing a business model and proformas for the Utility and participants, and interpreting legal council; assist with the design and procurement process for the first Community Solar installation; develop and deliver community solar workshops; and aid with grant management, reporting and replication.

Northwest SEED Key Personnel:

- Jennifer Grove, Executive Director
- Leslie Moynihan, Project Manager
- Jessica Raker, Project Manager

Northwest SEED is the only non-profit organization in the region focused entirely on advancing *community-scale clean energy*: energy conservation, efficiency and renewable energy projects with substantial community ownership and involvement. The organization has a proven track record providing technical assistance to diverse communities such as cities, Indian tribes, university campuses, and low income populations throughout the Northwest region.

Northwest SEED has played a key role in the ***Seattle Solar Initiative*** to date. Northwest SEED is providing project management, the development and delivery of PV and solar hot water workshops for residential customers, research on existing community solar models and consideration for replication in Seattle, and team management to conduct a gap analysis on local codes relative to best practices for fostering solar deployment. Through this work and related projects, Northwest SEED has emerged as the recognized authority on Community Solar, as demonstrated by requests to speak on the topic at the 2009 Annual SAC Meeting in San Antonio as well as conferences such as NextGen's Community Energy Roadmap for the Northwest.

Examples of Northwest SEED's relevant projects outside of the Seattle Solar Initiative include:

Northwest Community Solar Guide: Commissioned by the Bonneville Environmental Foundation, Northwest SEED is developing a guide to community solar for the Northwest. The guide covers the emerging movement for community solar projects, case studies of community solar models, relevant policies and financing opportunities specific to the Northwest states, and strategies for galvanizing a community, utility, and others required to move a project forward. The guide is expected to be released early fall of 2009.

Lopez Island Neighborhood Solar: The Lopez Community Land Trust (LCLT) recently completed development of one of the first zero net energy, affordable housing projects in the United States. The project consists of 12 super efficient buildings, providing a new office space for LCLT and low-income housing to Lopez residents. Northwest SEED provided assistance with planning, design, procurement, and construction of a 33kW PV system installed in June 2009 to meet 100% of the community's net energy needs.

Northwest Community Energy Website (www.nwcommunityenergy.org): Northwest SEED developed and manages a website tool that provides detailed information on community energy project development -- including community solar. Information on technologies, resource assessment, siting considerations, interconnection, permitting, financing and ownership models is presented in an easy to understand format.

Quileute Solar Project: Work with the Quileute Nation, located in remote La Push, Washington, resulted in the installation of four solar back-up power systems and alternate heat sources for members of the community with special needs. Northwest SEED assisted the Tribe with system siting, contractor selection, and consumer efficiency and conservation education.

In addition to providing our expertise in clean energy solutions for communities, Leslie Moynihan, a Northwest SEED Project Manager, brings direct experience with solar market transformation and installation programs to the team. Prior to joining Northwest SEED in 2005, Leslie served as Program Director for Solar Boston, a partnership of DOE's Million Solar Roofs Initiative. In partnership with the Massachusetts Technology Collaborative's Renewable Energy Trust, she also managed Boston's Solar to Market Initiative, the most successful PV installation program in Massachusetts during this time. The team is also strengthened with Jessica's technical expertise as an engineer and Jennifer's experience developing financing and ownership models for community energy projects.

Pike Place Market Preservation and Development Authority (PDA)

Pike Place Market PDA will host the first Community Solar project on one of their facilities and provide a location for an information display, project management and incidental operating support for the duration of the installation.

PDA Key Personnel:

- John Turnbull, Director of Asset Management and Special Projects
- Joe Parr, Capital Renovation Project Manager

The location proposed for the photovoltaic system at the Pike Place Market will provide a high profile, highly visible site for the project. Association with the Market brings with it affinity to many progressive social goals, including support of local agriculture, support of small businesses, low income housing, social services, active recycling and composting programs, smart growth strategies, etc. The Market also provides one of the highest profile locations for pedestrian and public information.

The Pike Place Market, the nation's oldest, continuously operating Farmers Market, opened its doors on August 17, 1907. It is the only public market in the nation to include low-income housing and the only historic district in the nation formed by citizen vote. Its original motto, "Meet the Producer" still blazes in neon today above the Market's main entrance.

In 1907, the Market was formed out of citizen outrage at the cost of onions and saved from the urban renewal wrecking ball in 1971 by a citizen initiative. The Market's busiest days were during the Great Depression when "meet the producer" also meant the best prices in town. Its lowest point was the day Japanese-Americans were interned and the Market lost all but 40 of its 600 farmers. Today's Market is visited by 10 million people each year. The only destination in our state that hosts more visitors is Mt. Rainier.

The Pike Place Market is located in the center of downtown Seattle. It is home to 300 commercial tenants, 100 farmers, 200 craftspeople, 200 street performers – all owner operated businesses; 60% of which have gross annual sales <$200,000. The Market is also home to nearly 400 low-income seniors and four human service agencies. The one-mile radius surrounding the Market houses nearly 35,000

people and employs more than 200,000. Yet, as a neighborhood, downtown is home to the greatest number of poor people of any neighborhood in our city.

The 1971 vote that created the Market historic district also established its three-part mission of today:

1. provide a venue for farmers to sell directly to the consumer;
2. support owner-operated and incubating businesses; and
3. maintain the Market's tradition of housing low-income people and the services they need.

The organization formed to re-develop the nine-acre Market and accomplish its multi-pronged mission was the Pike Place Market Preservation & Development Authority (PDA), a quasi-governmental non-profit organization that now owns, operates and maintains the Market's buildings. The notion to create a senior center for older downtown Seattle residents came out of the re-development process and ultimately four human service agencies were formed within the Market - the Pike Market Senior Center, Medical Clinic, Food Bank and Preschool.

The needs of those living downtown came to the PDA's attention through a demographic analysis of the area. It said that residents of downtown Seattle (including the Market) were the poorest, worst-housed, unhealthiest, oldest, and least-educated in *all* of Seattle. Armed with this information, a need survey was distributed to downtown residents and 200 people responded. Every one of the responses expressed concern about affordable health care, seniors called for a place to gather – a downtown "living room and dining room", and low-income parents lamented the ability to find affordable child care near their work.

The key personnel from the PDA supporting this initiative include Joe Paar and John Turnbull. Joe Paar is the PDA's Capital Renovation Project Manager (leading the PDA's $68 million renovation of historic buildings to improve energy efficiency, structural strength and enhance accessibility). Joe has over 14 years experience with real estate development and construction project management in the Pacific NorthWest. His work involved numerous LEED certified projects for public agencies. He joined the Market PDA in 2007. He has a long standing interest in sustainable design and construction practices. Joe will facilitate the planning and scheduling of the installation and oversee the construction. He will act as primary site contact for the solar contractors.

John Turnbull acts as the PDA's Director of Asset Management and Special Projects. John's work with capital development at the Pike Place Market dates from the urban renewal efforts in the 1970's and has continued until the present. His role has ranged from city staff for the historic preservation office to staffing a local merchants association and for 20 years as deputy director and lead of property management for the PDA. He has extensive knowledge of the Market buildings, tenants and operations. John will oversee the selection of the location of the permanent signage for the project and assist in using the PDA's publicity mechanisms to spread word about the project.

4. Project Timetable

	Community Solar Program Work Plan								
	Task	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**
1.0	**Develop program design**								
1.1	Draft business model								
1.2	Legal consult on program design and contract language								
1.3	Obtain City Council support for the program and the creation of a Community Solar Program ordinance								
1.4	Work with inter-divisional team at City Light to develop appropriate billing, tracking, and WA state incentive payment systems for Community Solar Program participants								
2.0	**Install 1st system**								
2.1	Finalize system site location selection								
2.2	Negotiate rooftop lease and O&M agreements								
2.3	Execute City Light standard procurement process for equipment								
2.4	Finalize equipment and contractor selection								
2.5	Install 1st Community Solar system								
2.6	Install permanent signage and educational display								
3.0	**Market Program**								
3.1	Develop marketing materials and web presence								
3.2	Conduct workshops on Community Solar								
3.3	Officially launch program to customers and open enrollment								
3.4	Maintain on-going participant relationship								
4.0	**Solar Revolving Fund**								
4.1	Develop policies and procedures for Solar Revolving Fund (ex. Accounting System)								
4.2	Develop criteria for use of Fund revenues								
5.0	**Project Oversight and Reporting**								
5.1	Oversee all team partners, coordinate and lead project meetings, manager project budge								
5.2	Prepare and submit project reports in accordance with grant requirements								
5.3	Participate in peer exchange opportunities/project replication w/ other WA and Solar America Cities								

5. ARRA Information

Based on the job creation multiplier of $92,000 (per full-time employment for 1 year, FTE) used in other ARRA applications, including the Block Grant Applications, we estimate that the $300,000 in federal funding requested will create or preserve 3 FTEs.

This project will especially support jobs and economic recovery in the greater-Seattle region in following areas:

- Photovoltaic installers, electricians, contractors
- Marketing/ publicity services
- Increased tourism by drawing more visitors/shoppers to Seattle's Pike Place Market

Gregory J. Nickels
Mayor of Seattle

July 17, 2009

Nancy Kiyota
U.S. Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, CO 80401

Dear Ms. Kiyota:

The City of Seattle, as represented by a collaboration between Seattle City Light, the Department of Parks and Recreation and the Department of Fleets and Facilities, is enthusiastically submitting an application to the U.S. Department of Energy for the Solar Market Transformation Funding Opportunity.

I am writing to express the City of Seattle's strong commitment to effectively use the Solar Market Transformation Funding to target barriers to solar by creating a Community Solar Program.

Seattle is a leader among U.S. cities in the pursuit of clean-energy solutions and the fight against global warming. In February of 2005, I launched the U.S. Mayors Climate Protection Agreement. Under this agreement, Seattle now leads more than 950 other U.S. cities representing nearly 84 million Americans who have committed to enacting policies and programs to reduce greenhouse-gas emissions.

As a city, we are meeting our commitment to climate protection through a focus on the development of green jobs, green buildings, alternative transportation and fueling infrastructure, and clean energy initiatives. Seattle's electric utility, Seattle City Light, is an important part of our commitment. Through aggressive conservation programs, innovative energy efficiency solutions and carbon offsets, Seattle City Light is the first large electric utility in the country to achieve "zero net emissions" of greenhouse gasses.

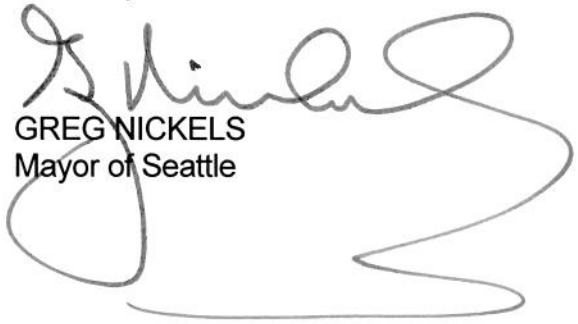
We recognize that renewable generation, especially solar, will play an important role in the city's future. However, we know there are still barriers to widespread solar adoption, including the high up-front cost, the fact that Seattle's large renter population (almost 50 percent of the population) cannot install solar on the homes they rent and the challenges with siting solar systems in locations that are free from shade and other obstructions.

Seattle plans to address these access barriers by creating a Community Solar Program with the Solar Market Transformation funding. This voluntary participation program will allow a more diverse cross-section of Seattle residents to share the benefits of installing solar. More participants will have access to solar because they will be able to buy just a share of a system instead of needing the financial means to buy an entire system. Additionally, renters will be able to participate and benefit from a well-sited, professionally maintained system. Participants will pay for the electricity produced by their share of the system and receive the Washington State Renewable Energy Production Incentive, previously only available to residents with the means to install solar systems on their own homes.

With the support from the Department of Energy's Solar America Cities award, the City of Seattle has addressed many important hurdles to solar. Our work has included city-wide public outreach, improvements in our interconnection standards, training of our electrical inspectors in the National Electrical Code as it relates to solar, and in-depth research into potential Community Solar Program models. We look forward to building off of this work with the formation of Seattle's Community Solar Program and the first Community Solar project. We will share our experiences in developing this program and project with all the other Solar America Cities and other communities interested in developing similar programs. Seattle's Community Solar Program is one more step to increasing the use of and familiarity with solar in our city and across the nation.

Thank you for considering our application.

Sincerely,



GREG NICKELS
Mayor of Seattle

City of Seattle
Gregory J. Nickels, Mayor

Seattle City Light
Jorge Carrasco, Superintendent

July 22, 2009

Nancy Kiyota
U.S. Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, CO 80401

Dear Ms. Kiyota:

The City of Seattle, as represented by a collaboration between Seattle City Light, the Department of Parks and Recreation, the Department of Planning and Development, and the Department of Fleets and Facilities, is enthusiastically submitting an application to the U.S. Department of Energy for the Solar Market Transformation Funding Opportunity.

I am writing to express a strong commitment by the City of Seattle and Seattle City Light to effectively use the Solar Market Transformation Funding to target key barriers to solar by creating a **Community Solar Program**. Seattle City Light commits to acting as lead on this project and will provide 44% of the total project cost, $265,000, in match through a combination of cash and services.

Seattle City Light (SCL) is a world-class leader in providing clean hydro-powered electricity for more than 100 years. With naming conservation as Seattle's energy resource of choice, City leaders displayed innovative foresight over two decades ago when they began to explore solar energy options during a time when solar energy was not seen as a viable energy resource option. Progressive leadership and strategic conservation oversight have brought the City of Seattle to the forefront in stimulating the market for residential and commercial development of solar and other renewable energy sources in the Seattle metropolitan region.

SCL began supporting customer efforts in generating their own electricity, even before the height of public awareness and legislative policies requiring such utility support. SCL meets and exceeds state legislation requirements by meeting the goals in Washington's Renewable Energy Production Incentive, providing customer-friendly net metering and interconnection standards, and offering voluntary programs whereby customers can demonstration their support of new renewable energy sources. Today there are over 180 photovoltaic projects installed in Seattle at residential homes, businesses, schools, universities, libraries, parks and other public faculties.

This proposal to develop a Community Solar Program will open the door for more Seattle residents to be able to participate in our solar future. Through the assistance provided by the Solar America City Award, we recognize that there are still access barriers to solar. For some people this access barrier is economic in that they are unable to afford the upfront cost of a full system. For others, the barrier is siting; they cannot install at their site either because of shading, roof structure or building ownership issues. As a city that has embraced the concept of P-Patch or community gardens, the benefits of creating a community "solar garden" are readily understandable. Just like gardeners who come together to grow food at one large, centrally located garden because they cannot have a garden where they live, community members will come together to grow solar. We have studied the community solar successes of other municipalities like the City of Ellensburg, Washington and Sacramento, California, and believe that we can create a great Community Solar model that blends the best aspects of such programs.

What's most exciting about this idea is its potential for replication. We believe that we can create a program that addresses all the legal, technical, and logistical hurdles to community solar in a format that is easy for other cities to implement. We understand that Seattle has a reputation for cloudy skies. If we can show that Community Solar works in Seattle, then it can work in any other city in the country!

A Community Solar Program responds to the visible passion our citizens have for solar- as demonstrated by the almost 800 attendees of our solar workshops and countless phone calls our Conservation Help Line receives regarding solar. Seattle's progressive population recognizes that renewable energy represents our future and we, the utility and the City, are being pushed to do more. With support from the Department of Energy, Community Solar can be a piece of SCL's sound renewable energy infrastructure that will meet the growing energy demands in a climate-conscious 21st century.

Thank you for considering our application.

Sincerely,

Robert Balzar
Conservation Resources Director
Seattle City Light

July 14, 2009

Nancy Kiyota
U.S. Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, CO 80401

Dear Ms. Kiyota:

Northwest Sustainable Energy for Economic Development (Northwest SEED) is proud to partner with Seattle City Light (SCL) for Seattle's Community Solar Program, and commits to provide no less than $10,000 of in-kind match toward the program.

Northwest SEED has extensive experience in the development, implementation, and management of conservation and renewable energy programs. The organization has a proven track record providing technical assistance to communities such as cities, Indian tribes, university campuses, and low income populations throughout our region in the area of clean, affordable energy.

Over the past year and a half, Northwest SEED has worked closely with SCL to implement the Seattle Solar Initiative as part of DOE's Solar America Cities program. The partnership has brought great success to the program to date. Northwest SEED's role has included the development and delivery of PV and solar hot water workshops to approximately 500 residential customers, research on existing community solar models and consideration for replication in Seattle, and team management to conduct a gap analysis on local codes relative to best practices for fostering solar deployment. During this time Northwest SEED has emerged as the recognized authority on Community Solar, demonstrated by requests to speak on the topic at the 2009 Annual SAC Meeting in San Antonio and NextGen's Community Energy Roadmap for the Northwest, as well as the development of the *Northwest Community Solar Guide* commissioned by the Bonneville Environmental Foundation.

Northwest SEED will play a significant role in Seattle's Community Solar Program, contributing to the development of a business model for Community Solar installations and Revolving Solar Fund, assisting with the design and procurement process for the first Community Solar installation, and providing public workshops on the Community Solar Program. We will also evaluate and report on project successes and lessons learned and participate in opportunities for project replication in other Washington and Solar America Cities. To support the Community Solar Program, Northwest SEED will provide no less than $10,000 of in-kind match by hiring a project intern to provide technical assistance.

We are confident that Seattle's Community Solar Program will truly overcome cost and access barriers to solar energy development. Funding support from the Department of Energy for this special project will allow the City of Seattle to overcome the necessary challenges to

1402 3rd Ave., Suite 901 • Seattle, WA 98101 • www.nwseed.org
206.328.2441 • FAX: 206.770.6570 • info@nwseed.org

Community Solar and to establish a self-sufficient, long-term program with great impact. As long-time advocates for clean, community-based renewable energy, we look forward to participating in this innovative and exciting program, and recommend your strong support for the City of Seattle's grant application.

Sincerely,

Jennifer Grove
Executive Director

Pike Place Market Preservation and Development Authority (PDA)
85 Pike Street, Room 500 P: 206.682.7453 E: info@pikeplacemarket.org
Seattle, WA 98101 F: 206.625.0646 W: www.pikeplacemarket.org

July, 27 2009

Nancy Kiyota
U.S. Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, CO 80401

Dear Ms. Kiyota;

The Pike Place Market Preservation and Development Authority (PDA) supports the application of the City of Seattle for funding of a "Community Solar" demonstration project. The PDA will offer $25,000, 4% of the total project cost, in value of in-kind services as part of the match requirement for this application.

The location proposed for the photovoltaic system at the Pike Place Market will provide a high profile, high visibility to the demonstration project. Association with the Market brings with it affinity to many progressive social goals, including support of local agriculture, support of small businesses, low income housing, social services, active recycling and composting programs, smart growth strategies, etc. The Market also provides one of the highest profile locations for pedestrian and public information.

The Pike Place Market, the nation's oldest, continuously operating Farmers Market, opened its doors on August 17, 1907. It is the only public market in the nation to include low-income housing and the only historic district in the nation formed by citizen vote. Its original motto, "Meet the Producer" still blazes in neon today above the Market's main entrance.

In 1907, the Market was formed out of citizen outrage at the cost of onions and saved from the urban renewal wrecking ball in 1971 by a citizen initiative. The Market's busiest days were during the Great Depression when "meet the producer" also meant the best prices in town. Its lowest point was the day Japanese-Americans were interned and the Market lost all but 40 of its 600 farmers. Today's Market is visited by 10 million people each year. The only destination in our state that hosts more visitors is Mt. Rainier.

The Pike Place Market is located in the center of downtown Seattle. It is home to 300 commercial tenants, 100 farmers, 200 craftspeople, 200 street performers – all owner operated businesses; 60% of which have gross annual sales <$200,000. The Market is also home to nearly 400 low-income seniors and four human service agencies. As a neighborhood, downtown is home to the greatest number of poor people of any neighborhood in our city. The one-mile radius surrounding the Market houses nearly 35,000 people and employs more than 200,000.

As a center of community activity, we can think of no better location to host Seattle's first Community Solar project. We encourage your support and favorable review of this request.

Sincerely,

Carol A. Binder
Executive Director

City of Seattle

Gregory J. Nickels, Mayor

Seattle City Light
Jorge Carrasco, Superintendent

July 22, 2009

Nancy Kiyota
U.S. Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, CO 80401

Re: Davis-Bacon Assurance

Dear Ms. Kiyota:

As part of our application for the Solar Market Transformation funding opportunity, the City of Seattle has attached our Budget Justification File to provide more information on our proposed activities and to explain our estimated costs as reported on the SF-424A form. If awarded the Solar Market Transformation Funding Opportunity, the City of Seattle, including Seattle City Light and all other departments, will comply with subchapter IV of Chapter 31 of title 40, United States Code (Davis-Bacon Act) and follow all DOE guidance on prevailing wages with ARRA funds.

The proposed new jobs under this award were estimated at $92,000 per full-time employment for 1 Year (FTE), therefore the $300,000 in federal funding requested will create or preserve 3.3 jobs.

If you have any questions regarding this submission, please contact me at 206-684-3740 or at robert.balzar@seattle.gov.

Sincerely,

Robert Balzar
Conservation Resources Director
Seattle City Light

Robert M. Balzar
206-684-3740
Robert.Balzar@Seattle.gov
Project Director for Solar Market Transformation Award

EDUCATION

B.S. in Electrical Engineering, 1975
University of Nevada, Reno, NV

PROFESSIONAL EXPERIENCE

Director, Conservation Resources, Seattle City Light—Seattle, Washington June 2006-Present

- Responsible for planning, design, marketing, implementation and verification of residential, commercial and industrial conservation and demand response programs
- Project Director for Dept. of Energy's Solar America City Award.
- Responsible for customer renewables programs
- Directed the efforts of a staff of 65 FTE, with four managers, two supervisors and a strategic advisor as direct reports
- Responsible for total program budgets of $41M per year. Responsible for 5 Year Plan which will increase spending to over $51M in program content by 2012.
- Northwest Energy Efficiency Alliance representative and Board of Directors Member
- Advisory Committee Member for 6th Power Plan of the Northwest Power and Conservation Council-Regional Resource Plan
- Served as Seattle City Light representative and have fully participated in the National Action Plan for Energy Efficiency lead by the US EPA and DOE
- Responsible to Superintendent, City Council and Mayor for planning, implementation and verification of conservation and customer renewable programs
- Responsible for external relationships with community leaders, regional advocates, large customers and other key stakeholders in the Northwest.

Director Marketing and Product Development—Pinnacle Homes, Las Vegas, Nevada 2001- 2006

- Designed and implemented short term marketing plans for four separate new housing communities
- Lead team that selected new sales company
- Participating in new land acquisition and product development
- Leading efforts for next generation of Energy Star and Water Smart homes

Director Energy Efficiency and Conservation—Nevada Power Company and Sierra Pacific Power Company, Las Vegas NV 1985—2000

- Developed, designed and implemented new conservation department for multi-utility company, Sierra Pacific Resources, for its operating companies, Sierra Pacific Power Company, Reno Nevada; and Nevada Power Company of Las Vegas Nevada---over 1,000,000 meter points and 7000 Mw summer peak demand
- Built program from initial approval of $2,000,000 in 2001 to over $40,000,000 in 2006. Over 20 employees and 6 major contractors with the equivalent of another 20 full time staff.
- Managed internal staff and external contractors in team based and results oriented environment
- Responsible for internal budget and staffing approvals, responsible for external regulatory approval of program design, budget and results with Nevada State Public Utilities Commission.
- Developed new cost-benefit model to allow for multiple year return and cost of capital accounting treatment

- Responsible for developing SolarGenerations and Green Power tariff programs---SolarGenerations is state funded residential solar photovoltaic rebate program. Over 1700 kw delivered from 315 individual projects.
- Results and budget control driven. Each year, budgets were within 5% of actual expenditures. Energy and peak reduction savings exceeded original goals. By 2005 our programs saved Nevada over 200 Mw of peak demand reduction and $100,000,000 in cumulative annual energy costs. (about 3% of total annual revenues).
- Served on multiple boards and commissions providing utility representation and advocacy—see section below
- Received National Awards from Energy Star in 2003/2004/2005 and Association of Energy Service Professionals in 2005

Various Engineering and Management Positions—Sierra Pacific Power Co., Reno, NV 1975-1985
- Director Energy Solutions--Lead multi-discipline team that formed un-regulated subsidiary, e3, focused on bringing large customer performance contracting energy savings
- Director of Resource Planning—1990-1995, submitted and obtained regulatory approval for three comprehensive resource plans
- Director of Energy Technologies—responsible for investigation of solar and wind energy solutions—most specifically as they relate to on-site solutions

Various Engineering and Sales Experience Stockton Ca, Reno Nevada
- Project Engineer for small electrical consulting firm designing electrical facilities for commercial and industrial customers
- Sales Engineer for small manufacturer's representative company selling industrial and electrical control products
- Nuclear Engineer for US Department of Navy at Mare Island Naval Shipyard refueling nuclear submarines

SYNERGISTIC ACTIVITIES
- Northwest Energy Efficiency Alliance-Portland—2007-present—Also serving on Strategic Planning Committee
- Nevada State Task Force on Renewable Energy and Energy Conservation—2001-2006--past
- SWEEP (Southwest Energy Efficiency Project)—Boulder Co—Past Chair and Board Member—2002-2006
- YMCA of Southern Nevada—2002-2007Board Member and Chair of Facilities Committee
- Provided testimony before State Commissions in Nevada, California, Arizona and Arkansas

REGISTRATION
Registered Professional Engineer in Nevada and California
Member NSPE, AEE
Member Southern Nevada Homes Builders--past

SKILLS SUMMARY
Utility executive with extensive experience in energy efficiency, conservation and renewable energy. On two separate occasions, built and lead a large multi-discipline organization developing and implementing complex residential, commercial and industrial energy efficiency, conservation, demand response and small scale renewable programs. Provided strategic direction and managed multiple programs and associated staff with yearly budget in excess of $40,000,000. Interacted with city, state and regional regulatory agencies and other external stakeholders. Served on regional energy efficiency and conservation advocacy boards and committees.

MICHAEL THOMAS LITTLE
4847 26TH AVENUE S.W. SEATTLE, WA 98106
Work phone 206 684-3233 email address michael.little@seattle.gov

Education & Additional Training

- Bachelor of Science, Geography, University of Washington, Seattle, WA, August 1981
- Energy Management Program, Edmonds Community College, Edmonds, WA, 1982-83
- Project Management Certificate Program, University of Washington, Seattle, WA, June 1992
- The Leading Edge Effective SUPERvision Training, June 2005

PROFESSIONAL EXPERIENCE

Energy Planning Supervisor, Division Support — **Conservation Resources Division**
July 1999 to present — **Seattle City Light, Seattle, WA**

Overview: Supervise a diverse staff responsible for providing the Conservation Resources Division with program planning, evaluation, outreach, marketing, and web design services. Responsible for overseeing the implementation and operation of the Division's sustainability, renewable resource, and greenhouse gas mitigation strategies. Grant administrator for Dept. of Energy's Solar America City Award.

Contract oversight: Successfully engaged the Bonneville Power Administration (BPA) to secure over $60 million in energy conservation-related program funding. Manage relationship with BPA and oversee all aspects of current funding agreements. Manage contract with the City's Department of Planning and Development for the development, implementation and enforcement of the Seattle Energy Code. Supervise consultant contracts that provide technical, market potential, program evaluation, and resource planning support to the Division.

Budget Oversight & Financial Planning: Act as the Division's primary contact to the utility's Budget and Finance Divisions for resolving budget issues and coordinating financial planning activities. Support the Division in tracking expenditures and budget monitoring.

Regional Collaboration: Served on BPA's Utility Sounding Board with a select group of utility representatives to design the next regional energy conservation contract offerings. Continue to provide support to BPA in their marketing and implementation efforts.

Program Planning, Implementation, and Evaluation: Led the Division's 2000 Conservation Potential Assessment process and laid the groundwork to double the annual energy savings. Outlined the program offerings and associated budgets to increase the Division's annual goal to 12 aMW. Oversee the Division's process and impact evaluations in addition to market studies and other data gathering efforts.

Legislative & Policy Support: Actively engaged in the rulemaking process for Initiative 937 and SSB 5101 the renewable energy production incentive program. Recently facilitated the utility's PURPA standards policy implementation.

Sustainability & Environment: Oversee the utility's Green Power Programs, the Division's Green Building Program, and the Leadership in Energy and Environmental Design (LEED) activities. Provided technical support to the City of Seattle's Green Ribbon Commission on reducing greenhouse gas emissions; group provided Mayor Greg Nickel's with recommendations to craft his Climate Action Plan.

Energy Planning Analyst — **Conservation Resources Division**
April 1995 to June 1999 — **Seattle City Light, Seattle, WA**

Overview: Served as the primary planner for the Division's energy conservation programs. Led the Division's effort to create the 1996 Energy Management Services Plan. This five-year implementation and budget plan was designed in light of declining funding from the Bonneville Power Administration.

Program Planning: Acted as the Division's residential energy conservation planning resource. Designed the initial pilot program and implemented the Home Resource Profile service for residential customers.

Departmental Initiatives: Primary author of the generation-related component of Seattle City Light's Proposed Business Plan published in mid-1996. Worked with generation staff to create a succinct characterization of the Department's strategic direction when faced with an uncertain electric utility industry future due to restructuring.

Reporting and Presentations: Primary author of the Division's semi-annual report to the City Council on the Energy Management Services Plan. Prepared report with companion PowerPoint presentation highlighting the Division's accomplishments over the previous six months.

Conservation Program Specialist II **Energy Conservation Division**
May 1992 to March 1995 **Tacoma Public Utilities, Tacoma, WA**

Overview: Hired by Tacoma Public Utilities to design, implement and manage new residential programs.

Program Planning & Implementation: Initiated the Water Heater Rebate Program and the Watt 'N Water Conservation Program that installed showerheads in over 45,000 homes. Provided financial, technical, and market analysis of proposed programs.

Regional Leadership and Collaboration: Served as the chair of the Northwest Residential Efficient Appliance and Lighting Group. This region-wide group was initiated to bring new energy efficient technology to the Pacific Northwest. Worked with other groups to influence both appliance manufacturers and Federal appliance standards.

Energy Conservation Programs Analyst **Energy Conservation Division**
April 1985 to May 1992 **Snohomish Public Utility District, A Everett, WA**

Overview: Started professional career as a residential Programs Analyst. Worked very closely with residential customers to deliver energy conservation programs.

Program Planning & Implementation: Designed and implemented the first appliance rebate programs in the Pacific Northwest. Developed a regional water heater rebate program for the Bonneville Power Administration and its customers. Implemented the first FM-radio based load management program in the region that controlled the operation of electric water heaters.

EXECUTIVE SUMMARY

Energy Planning Supervisor with strong energy conservation program planning and implementation experience combined with a policy background. Act as a senior policy advisor and called upon to provide strategic insight on program offerings and customer service initiatives across the Seattle City Light and the City of Seattle. Broad experience in budget management and very knowledgeable with the utility's financial planning and budget tools. Demonstrated ability to work effectively and cooperatively across all levels of the utility, with other City Departments, and with other regional entities. Capacity to communicate technical details in an efficient manner to diverse audiences. Key qualifications include:

- 22 years experience in electric utility and energy conservation field
- Knowledge of technical and policy issues facing the region's electric utility industry
- Program development, implementation, and management skills
- Creative problem solving and negotiation abilities
- Strong communication and technical writing skills
- Commitment to providing excellent customer service

LESLIE BRAZEAU

2445 E. Interlaken Blvd. Seattle, WA 98112; 206.684.3864 (work); leslie.brazeau@seattle.gov

EDUCATION

Tulane University, New Orleans, LA
Master of Business Administration, Marketing Management

University of California, Santa Barbara, CA
Bachelor of Arts, Physiology

PROFESSIONAL EXPERIENCE

Conservation Division Marketing Manager, Seattle, WA, Seattle City Light 2008-Present
Lead marketing team to engage customers in achieving goal of 65.5 aMW energy savings through 2012, meeting most of the utility's projected load growth.

Build division marketing function

- Grow internal talent and onboard new staff to achieve accelerated conservation goals.
- Create a centralized customer knowledge data repository.

Inspire and engage residential and business customers in energy conservation

- Develop marketing strategy and plan to achieve program participation and behavior change.
    - Grow awareness for Seattle City Light energy conservation mission and goals.
        - Build customer understanding of resource conservation stewardship.
    - Prioritize and direct resources to support energy savings goals: introduce processes, build tools, and identify best practices to support a scalable platform for growth.
- Establish website as the premier source for energy information and education in Seattle.
    - Champion website optimization.
- Implement ongoing residential and business customer survey panels to benchmark and monitor program awareness, understanding and relevancy.
    - Use feedback to enhance current and prospective programs and campaigns.

Revamp existing voluntary renewable energy programs

- Re-launch in 2010 offering customers a portfolio of renewable energy program options.

Consumer Products Consultant, Seattle, WA 2007
Jones Soda Company, Seattle, WA

- Developed strategic marketing plan for direct-to-consumer sales channel: myJones.com.

Mike's Hard Lemonade, Seattle, WA

- Automated national distributor POS order process to create an efficient order and inventory management system. Led multi-functional team (sales, IT, and independent distributors) in designing new project management tools: web portal and co-op budget tracking tool.
- Developed 2007 account-specific promotion plan. Created internal MHL coupon development process, increasing time-to-market and budget efficiency.

Vice President of Marketing, Bellevue, WA, Her Interactive PC Games 2005
Guided domestic and international market strategic planning for this award-winning PC game developer and publisher; executed consumer and retail channel initiatives on a modest budget.

- Managed agencies to develop interactive assets: game trailers, mini-games, online coupons and a viral Holiday eCard.
- Updated website and built programs to drive core audience loyalty and attract new customers.
    - Increased site unique visits to 90K/mo. – up 100% versus prior year.
    - Grew 2005 online store sales +38%.

Director of Marketing, Seattle, WA, DHL / Airborne Express 2001-2004
Responsible for Company Brand Development and Marketing Communications
Brand Development

- Facilitated launch of DHL brand in the U.S. while retiring the Airborne Express brand. Adapted DHL global brand materials to resonate with U.S. consumers.
- Led DHL/Airborne Customer Integration Marketing Task Force. Developed strategy and programs to retain and transition major customers ($2.2B total revenue) to newly launched DHL U.S. brand.

Strategic Communication

- Created Airborne Express strategic marketing communication platform.
- Built the Airborne Digital Selling Guide (DSG), a proprietary laptop-based selling presentation. This state-of-the-art selling tool provided a unified image and voice for Airborne products and services worldwide, enabling Sales to cross-sell and up-sell products within the corporate portfolio.
    - Awarded 2003 APEX Award by CEO for outstanding contribution to company.

Western U.S. Field Marketing Manager, Seattle, WA Pepsi-Cola Company 1993 -1997
Provided marketing leadership and expertise to build bottlers' businesses with consumers and retailers. Worked closely with Sales and HQ marketing to build and execute annual plan.

- Developed annual operating plan for the West's 200 million case business. Analyzed historical brand, package and channel trends; prioritized opportunities and developed marketing calendar.

Channel Marketing Manager, Seattle, WA Pepsi-Cola Company 1991-1993
Marketing responsibility for Northwest U.S. fountain syrup business development. Worked with retail marketing partners (restaurants, prestige properties, resorts, etc) to grow Pepsi fountain beverage distribution and individual store sales.

Brand Manager, Los Angeles, CA Pepsi-Cola Company 1987-1991
Consumer marketing responsibility for company-owned Southern California region ($500 million in sales). P+L responsibility for $22 million marketing budget. Managed three agencies: Edelman Worldwide Public Relations, TLP/ BBDO and La Agencia d'Orci.

SUMMARY

- **Consumer products marketing executive** with extensive brand management experience.
- **Leadership and results-focus:** Skilled in developing and implementing successful marketing campaigns by clearly defining strategic goals, mapping operational plans and measuring business results.
- **Brand development:** Expertise in creating compelling target audience messaging: driving consumer awareness and relationship with brand.
- **Business planning and process development expertise:** Experience developing business intelligence tools: metrics, process maps, analyses to increase go-to-market efficiencies.

Meg Gluckman

206.684.4827 ~ meg.gluckman@seattle.gov

EDUCATION AND TRAINING

Masters of Business Administration (MBA), Bainbridge Graduate Institute, Seattle, WA 2009
Concentration in Sustainable Energy Solutions.

B.S. in Biological and Environmental Engineering, Cornell University, Ithaca, NY 2002
Interdisciplinary degree in engineering, physical sciences and technology; courses in international development, energy resources, policy; capstone project on photovoltaic design for new college dorms.

The Climate Project, Vashon, WA / Nashville, TN 2007
Speaker and outreach training with former Vice President Al Gore and experts in climatology and national policy on "Climate Change: the Science, Implications, and Response" from personal, community, and policy perspectives.

Basic Energy Auditing, South Seattle Community College, Seattle, WA 2006
Introduction to residential energy auditing. (3 Credits)

Engineering Internships
Pembina Institute, Calgary, AB 2001
Northern Power Systems (now Distributed Energy Systems), Waitsfield, VT 2000

PROFESSIONAL EXPERIENCE

Solar America City Coordinator, Seattle City Light, Seattle, WA April 2008 – Present
Lead Seattle's efforts under Solar America City award. Activities included: facilitating inter-divisional task force on interconnection, conducting monthly public and city-staff focused PV and solar hot water workshops, drafting of City Light's *Small Renewables Action Plan*, organizing of installer and electrical inspector trainings, supervising research on solar access regulations, close collaboration with contractor Northwest SEED on economic barrier research, public outreach, and DOE reporting requirements.

Graduate Intern, Seattle City Light, Seattle, WA 2008
Within SCL's Conservation Resources Division, my efforts focus on the CRD's 5-Year Energy Efficiency Action Plan, the Emerald City Solar Initiative, and SCL's Green-Up! program for commercial customers.

Research & Development Consultant, eFormative Options, LLC, Vashon, WA 2006 –2007
eFormative Options offers consulting, project management and market development assistance to organizations primarily within the renewable energy industry. My role as consultant included: policy and market research, assisting with proposal, report and grant preparation, coordinating logistics, and translating technical information into easy-to-digest documents. Past and present clients and partners include: National Renewable Energy Lab, Interstate Renewable Energy Council, Canadian Wind Energy Association, Chinook Wind, Windustry, American Solar Energy Association, Southwest Wind Power, Database for State Incentives for Renewable Energy, etc.

Presenter, The Climate Project, Vashon, WA 2007
Building on the visibility of the documentary, *An Inconvenient Truth*, former Vice-President Al Gore launched The Climate Project, a nonprofit dedicated to ushering in a massive call-to-action, with a goal to train 1,000 individuals in the basics of Gore's slide presentation. Volunteers, selected from thousands of applicants from all 50 states and internationally, committed to offering presentations in their local

communities on the science behind Climate Change as well as positive action steps. As one of the 25 presenters from Washington State, I worked with a colleague to offer presentations (typically 2 hours long, for 50-100 people) for clubs, local colleges and schools, faith communities, and other interested organizations.

Outreach Consultant, Institute for Environmental Research & Education, Vashon, WA 2006
IERE received a Bullitt Foundation grant to engage the Vashon Island (WA) community in a discussion of energy conservation, renewable energy and the possible role of a Public Utility District (PUD) on the island. My responsibilities included: coordination of community discussions, collaboration with local papers to cover discussion, creation of fact sheets on PUDs, conservation and energy audit case studies, planning public meetings, and organization of various other outreach activities.

Volunteer, Grupo Fenix, Nicaragua, 2004-2005
Grupo Fenix, a Nicaraguan nonprofit, researches and facilitates the application of appropriate renewable energy technologies. My work with GF's Workshop Sabana Grande (WSG) included: production of PV panels, installation of PV systems, collaboration with WSG's coordinator to improve safety and durability of PV system design, creation of marketing materials, training staff in basic computer use and accounting, and translation for and teaching of workshop visitors.

My activities with the Solar Women of Totogalpa (SWT), a women's group centered around the use of solar cookers as an alternative to traditional firewood cook stoves, included: creation of an accounting and project administration system for the Solar Center capital project, assistance in the Solar Center design process, education of the administrative assistant in documentation of group's activities and finances, completion of quarterly report for funders, and submittal of grant application (awarded) for the Solar Center.

Systems Engineer, Global Resource Options (now groSolar), Strafford, VT 2002-2004
Global Resource Options designs, sells and installs residential and commercial, on and off-grid, photovoltaic and solar hot water systems. My responsibilities included: residential sales for VT/NH, site visits, system design, proposal formation, completion of incentive and net metering applications, support engineering for residential and commercial projects throughout New England and New York, crew member for large photovoltaic system installations; annual marketing effort through regional tradeshows, and a four-week energy unit in local 5th grade class.

EXPERIENCE OVERVIEW
Energy consultant specializing in renewable energy policy and market research, photovoltaic and solar thermal system design, and community outreach/ education on energy issues including conservation, climate change, and renewable energy.

Jennifer G. Grove

Education

University of Washington, Seattle, WA
B.A., Business Administration, 1995
University of Sevilla - Study Abroad Program, 1994

Professional Experience

Northwest Sustainable Energy for Economic Development – Seattle, WA **4/2003-present**
Executive Director
Responsible for managing the day-to-day affairs of the organization under the general oversight of the Board of Directors, including cash flow management, staff supervision, staff evaluation, and hiring. Provide primary oversight of operations, finances, personnel and programs to ensure compliance with and implementation of mission, goals, objectives, policies, and legal, reporting and regulatory requirements. Research and design new program areas, prepare funding proposals, work plans and project budgets for the organization. Completed the Institute for Conservation Leadership's Executive Director Program in November 2008.

Program Director
Managed community energy projects, including community wind and solar projects. Project management tasks included developing and managing project work plans and budgets, conducting feasibility analysis, securing project financing and overseeing procurement and construction activities. Assisted with project and organization funding proposals and work plan development. Awarded a Certificate of Excellence in Energy Programs from WA Dept. of Agriculture in 2004.

AT&T Wireless Services – Redmond, WA **1995-2002**
Team Manager
Primary responsibilities included hiring, training, supervising and motivating a software development team. Created an innovative gap analysis tool to assess employee skills and define training opportunities. Implemented a mentorship program between senior and junior team members. Simultaneously supervised the team and a $4M project, requiring extremely close work with all levels and departments of the organization. Led project team meetings, published project statistics, and managed over 75 team members located across the country. Led technology presentations and team building events for over 200 employees.

Project Manager
Managed project objectives, schedule, resources and communication pieces for internal system upgrades. Documented and distributed detailed project plans to over 100 internal clients. Designed and developed new tools to aid in project communication, process documentation and lessons learned. Nominated by peers for an employee recognition award.

Business Analyst
Analyzed, researched and documented the impacts and costs of new system enhancements. Negotiated with Marketing, Information Technology, Engineering, Customer Service and Finance to define system requirements. Partnered with an external vendor to schedule, implement and test new enhancements. Designed a new process for client-vendor communication that required training members to use new forms and methods. Received an employee recognition award for my achievements in this position.

Leslie G. Moynihan

Education

Tufts University, Medford, MA
B.S., Environmental Studies and Anthropology, 1999
Magna Cum Laude
Semester Abroad: University of Newcastle, New South Wales, Australia, 1997

Professional Experience

Northwest Sustainable Energy for Economic Development , Seattle, WA 8/2005-present
Project Manager

- Project manager for the Seattle Solar Initiative – a project of the US Dept. of Energy's Solar America Cities program.
- Provide technical assistance to NW Indian Tribes, rural communities, neighborhood groups, and college campuses in energy planning and renewable energy project development.
- Develop publications and online resources for community energy project development.
- Contribute to organizational fundraising, grant writing, and strategic development.
- Participate in regional renewable energy policy-making efforts.

Bonneville Environmental Foundation, Portland, OR 2005
Independent Contractor

- Developed and marketed replicable green power program options for NW public utilities.
- Developed marketing materials for renewable energy project management services.

North Carolina Solar Center, Raleigh, NC 2005
Independent Contractor

- Researched and updated Western states' renewable energy policies and incentives for the Database of State Incentives for Renewable Energy (DSIRE).

American Wind Energy Association Small Wind Advocate Team, Seattle, WA 2005
Independent Contractor

- Developed content for AWEA website on state policies for small wind turbine ownership.

Massachusetts Energy Consumers Alliance, Boston, MA 2000-2004
Program Director

- Developed, secured funding for, and directed the most successful photovoltaic installation program in Massachusetts, funded by the Mass. Technology Collaborative's Renewable Energy Trust.
- Directed Solar Boston, a Partnership of the Department of Energy's Million Solar Roofs Initiative.
- Participated in the MA Distributed Generation Collaborative, established by the Department of Telecommunications and Energy to develop statewide interconnection standards.
- Assisted in launching Mass Energy's green electricity product, *New England GreenStart™*.
- Managed the aggregation (purchase) of Renewable Energy Certificates from solar energy installations for inclusion in the *New England GreenStart™* mix.
- Developed and implemented clean energy outreach and education plans.

Jessica G. Raker

Education

University of Washington, Seattle, WA
Masters of Science in Mechanical Engineering, June 2003
Geographic Information Systems Certificate Program, June 2005

Wesleyan University, Middletown, CT
Bachelor of Arts with honors, May 1998
Double major in Physics/Neuroscience and Behavior

Professional Experience

Northwest Sustainable Energy for Economic Development – Seattle, WA 2/06-present
Project Manager

- Manage Northwest SEED's Tribal Energy Program. Projects include conducting energy conservation education workshops with tribal residents and staff training with tribal employees, purchasing and delivering energy conservation materials, and working with local community action agencies to promote additional services to tribes.
- Write and assist with the preparation of grants for community projects relating to renewable energy and energy efficiency projects.
- Conduct initial energy audits and recommend energy efficiency projects for public buildings.
- Perform renewable resource and energy assessments for communities, tribes, and individuals and making recommendations for development of renewable energy.

Resource and Data Analyst

- Conducted location-specific wind resource analysis using meso-scale wind map model predictions to perform basic statistical assessments of potential sites for wind energy projects; refinement of statistical assessment based on site characteristics, historical time series data or long-term wind resource summary statistics.
- Assisted wind turbine site hosts with site prep, turbine installation, and commissioning. Assembled pertinent information in geographic layers for GIS maps.
- Collected and analyzed time series data using standardized data-handling procedures and database queries including compilation of summary statistics as well as identification of unexpected/erroneous values.
- Conducted workshops and delivered public remarks on wind power. Outreach included testimony at the Washington legislature and a presentation on small wind permitting at Solar Energy International's Wind Power workshop in fall 2003.

Research Assistantships, University of Washington, Seattle, WA 9/2001 – 6/2003
Completed an energy study of Stehekin, an isolated town in the North Cascades, involving a demonstration solar photovoltaic array, energy conservation and storage planning, and hydro facility upgrade. Provided a feasibility study of the use of fuel cell boats and buses in the National Parks to the National Park Service. This work was done under the supervision of Professor Philip Malte for the National Park Service.

Teaching Assistantships, University of Washington, Seattle, WA 6/2001 – 6/2003
Taught fundamentals of power and energy to students as a supplement to a course on renewable energy. Provided help sessions and graded assignments for engineering undergraduates.

Joe Paar

Education
BA in Construction Management, 1999
Masters in Business Administration, 2005
University of Washington, Seattle, WA

Professional Experience
Capital Renovation Project Manager
Pike Place Market Preservation and Development Authority, Seattle, WA
2007– Present

Joe leads the PDA's $68 million renovation of historic buildings to improve energy efficiency, structural strength and enhance accessibility. The PDA anticipates a 2012-2013 completion date and a total of 10 buildings will be affected by these renovations. The Market is aiming for a LEED or LEED Silver rating. Joe manages 3 full-time staff at the PDA and oversees more than 50 consultants, contractors, and subcontractors.

President
Paar Consulting, Seattle, WA 2004-2007

Joe consulted on development and construction management, with a focus on commercial, biotech, and health care facilities. He brought to the projects a focus on sustainability, with his flagship work being one LEED Silver design and preconstruction project.

Project Manager
Lease Crutcher Lewis, Seattle, WA 1999-2004

At Lewis, Joe managed multiple design and construction projects throughout the Pacific Northwest. These projects included design and preconstruction planning on multiple LEED Silver buildings.

Estimator
Specialty Subcontractor, Seattle, WA 1995-1997

Joe worked for three years estimating commercial construction projects located throughout the Northwest.

John Turnbull

Education
BA in Urban Studies
Cornell University, Ithaca, NY, 1976

Professional Experience
Director of Asset Management and Special Projects
Pike Place Market Preservation & Development Authority, Seattle, WA 2008-present

John is responsible for project management for the PDA and plays a key role in supporting the efficiency upgrades to the Market.

Field Director
National Development Council, Dallas, TX 2007-2008

John worked as field director with the National Development Council on economic development efforts in the Midwest. While based out of Dallas, John spent the majority of his time traveling to small towns to consult on development projects.

Project Manager
Providence Community Housing, New Orleans, LA 2006-2007

John worked on post-Katrina housing renovation in New Orleans in collaboration with Catholic Community Services and Enterprise Community Partners. His focus was on developing and implementing innovative building technologies.

Project Manager
Lorig Associates, Seattle, WA 1999-2006

John managed the development of public-private partnerships in affordable housing, student housing and special needs facilities.

Property Manager
Pike Place Market PDA, Seattle, WA 1982 – 1999

John's work with capital development at the Pike Place Market dates from the urban renewal efforts in the 1970's and has continued until the present. His role has ranged from city staff for the historic preservation office to staffing a local merchants association and for 20 years as deputy director and lead of property management for the PDA. He has extensive knowledge of the Market buildings, tenants and operations.

City Staff for Historic Preservation
City of Seattle's Urban Renewal Office, Seattle, WA 1978-1982

John was responsible for environmental reviews, master planning, housing and market development, and lead efforts to create a historic district.

6.	**Object Class Categories**	**Year 1**	**Year 2**
a.	Personnel	$ 46,400	$ 15,900
b.	Fringe Benefits	$ 69,700	$ 23,200
c.	Travel	$ 6,000	$ 6,000
d.	Equipment	$ 240,000	$ -
e.	Supplies	$ 19,000	$ -
f.	Contractual	$ 154,100	$ 19,700
g.	Construction	$ -	$ -
h.	Other	$ -	$ -
i.	Total Direct Charges	$ 535,200	$ 64,800
j.	Indirect Charges	$ -	$ -
k.	Totals	$ 535,200	$ 64,800

Personnel

Task # and Title	Position Title	Budget Period 1			Budget Period 2			Project Total Hours	Project Total Dollars	Rate Basis
		Time (Hours)	Pay Rate ($/Hr)	Total Budget Period 1	Time (Hours)	Pay Rate ($/Hr)*	Total Budget Period 2			
Task 1- Develop program design	Program Coordinator (1)	352.5	$ 32.37	$ 11,410	117.5	$ 33.34	$ 3,918	470	$ 15,328	Actual Salary
	Planning Supervisor (1)	45	$ 39.94	$ 1,797	15	$ 41.14	$ 617	60	$ 2,414	Actual Salary
	Director(1)	15	$ 65.00	$ 975	5	$ 66.95	$ 335	20	$ 1,310	Actual Salary
	Legal Council (1)	7.5	$ 45.45	$ 341	2.5	$ 46.81	$ 117	10	$ 458	Actual Salary
	Planning Specialist (1)	82.5	$ 34.94	$ 2,883	27.5	$ 35.99	$ 990	110	$ 3,872	Actual Salary
	TASK TOTAL	502.5		$ 17,406	167.5		$ 5,976	670	$ 23,382	
Task 2- Install 1st System	Program Coordinator (1)	172.5	$ 32.37	$ 5,584	57.5	$ 33.34	$ 1,917	230	$ 7,501	Actual Salary
	Planning Supervisor (1)	15	$ 39.94	$ 599	5	$ 41.14	$ 206	20	$ 805	Actual Salary
	Director (1)	3.75	$ 65.00	$ 244	1.25	$ 66.95	$ 84	5	$ 327	Actual Salary
	Legal Council (1)	11.25	$ 45.45	$ 511	3.75	$ 46.81	$ 176	15	$ 687	Actual Salary
	Planning Specialist (1)	45	$ 34.94	$ 1,572	15	$ 35.99	$ 540	60	$ 2,112	Actual Salary
	Accountant (1)	3.75	$ 28.65	$ 107	1.25	$ 29.51	$ 37	5	$ 144	Actual Salary
	TASK TOTAL	251.25		$ 8,618	83.75		$ 2,959	335	$ 11,576	
Task 3- Market Program	Program Coordinator (1)	71.25	$ 32.37	$ 2,306	23.75	$ 33.34	$ 792	95	$ 3,098	Actual Salary
	Marketing Manager (1)	56.25	$ 43.36	$ 2,439	18.75	$ 44.66	$ 837	75	$ 3,276	Actual Salary
	Planning Specialist (1)	26.25	$ 34.94	$ 917	8.75	$ 35.99	$ 315	35	$ 1,232	Actual Salary
	TASK TOTAL	153.75		$ 5,663	51.25		$ 1,944	205	$ 7,607	
Task 4- Develop Solar Revolving Fund	Program Coordinator (1)	60	$ 32.37	$ 1,942	20	$ 33.34	$ 667	80	$ 2,609	Actual Salary
	Planning Supervisor (1)	18.75	$ 39.94	$ 749	6.25	$ 41.14	$ 257	25	$ 1,006	Actual Salary
	Director (1)	15	$ 65.00	$ 975	5	$ 66.95	$ 335	20	$ 1,310	Actual Salary
	Accountant (1)	22.5	$ 28.65	$ 645	7.5	$ 29.51	$ 221	30	$ 866	Actual Salary
	Planning Specialist (1)	26.25	$ 34.94	$ 917	8.75	$ 35.99	$ 315	35	$ 1,232	Actual Salary
	TASK TOTAL	142.5		$ 5,228	47.5		$ 1,795	190	$ 7,023	
Task 5- Project Oversight and Reporting	Program Coordinator (1)	195	$ 32.37	$ 6,312	65	$ 33.34	$ 2,167	260	$ 8,479	Actual Salary
	Planning Supervisor (1)	75	$ 39.94	$ 2,996	25	$ 41.14	$ 1,028	100	$ 4,024	Actual Salary
	Planning Specialist (1)	3.75	$ 34.94	$ 131	1.25	$ 35.99	$ 45	5	$ 176	Actual Salary
	TASK TOTAL	273.75		$ 9,439	91.25		$ 3,241	365	$ 12,679	
	Project Total	1323.75		**$ 46,353**	441.25		**$ 15,915**		**$ 62,267**	
* Assumed COLA	3%									

	Total Hrs YR 1			Total Hrs YR 2
Program Coordinator	851.25			283.75
Planning Supervisor	153.75			51.25
Director	33.75			11.25
Legal Council	18.75			6.25
Planning Specialist	183.75			61.25
Accountant	26.25			8.75
Marketing Manager	56.25			18.75

Fringe

Position Title	Hourly Rate	Fringe Rate	Fringe	A&G	Total Loaded Fringe ($/hr)
Program Coordinator	$ 32.37	60%	$ 19.42	$31.62	$ 51.04
Planning Supervisor	$ 39.94	60%	$ 23.96	$31.62	$ 55.58
Director	$ 65.00	60%	$ 39.00	$31.62	$ 70.62
Legal Council	$ 45.45	60%	$ 27.27	$31.62	$ 58.89
Planning Specialist	$ 34.94	60%	$ 20.96	$31.62	$ 52.58
Accountant	$ 28.65	60%	$ 17.19	$31.62	$ 48.81
Marketing Manager	$ 43.36	60%	$ 26.02	$31.62	$ 57.64

The above Fringe Rates of 60% was approved for use in Seattle's Solar America Cities award and is valid through 2010. This is Seattle City Light's standard fringe rate. Questions regarding this rate can be addressed by Kyung Kim, Seattle City Light's Cost Accounting Manager at 206-684-3221.

Travel

Purpose of Travel	No. of Travelers	Depart From	Destination	No. of Days	Cost per Traveler	Cost per Trip	Basis for Estimating Cost
Domestic Travel							
1st Annual meeting of all Solar Market Transformation recepients	3	Seattle	TBD	4	$1,750	$5,250	Previous Experience
Travel to regional meetings	3	Seattle	TBD	2	$250	$750	Previous Experience
Budget Period 1 Total						**$6,000**	
2nd Annual meeting of all Solar Market Transformation recepients	3	Seattle	TBD	4	$1,750	$5,250	Previous Experience
Travel to regional meetings	3	Seattle	TBD	2	$250	$750	Previous Experience
Budget Period 2 Total						**$6,000**	
Total Travel Costs						**$12,000**	

Equipment

Equipment Item	Qty	Unit Cost	Basis of Cost	Justification of Need
30-60 kW Photovoltaic System including: photovoltaic modules, racking, inverters, monitoring equipment, and balance of system components.	1	$240,000	Prior Experience*	For first community solar project.
Total Equipment Cost Year 1		**$240,000**		

* Seattle has over 180 utility-tied photovoltaic system. Seattle City Light has tracked the cost of these system installations and seen a range of $8 to $10 per watt installed, with 80% of the cost being for equipment. Seattle City Light expects economies

Supplies

General Category of Supplies	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of Need
Print Materials/ Handouts	10,500	$0.20	$2,100	Previous Experience	To be used in marketing of Community Solar Program at workshops, other public events, and in display near project.
Workshop set-up	6	$500	$3,000	Previous Experience	For space/food/misc.
Bill Insert	380,000	$0.03	$11,400	Previous Experience	Marketing Community Solar to City Light's customers.
Radio segments	10	$250	$2,500	Previous Experience	Marketing Community Solar to City Light's customers.
Total Supplies Year 1			**$19,000**		

Contractual

Sub-Recipient Name/Organization	Purpose/ Tasks in SOPO	Budget Period 1 Costs	Budget Period 2 Costs	Project Total
Northwest SEED*	Will provide consulting in best practices for Community Solar Program design, assistance in siting and selecting project, community outreach and in project reporting.	$ 69,100	$ 19,700	**$ 88,800**
Installation Contractor (To be selected through City's procurement process)**	Will install first Community Solar project.	$ 60,000	$ -	**$ 60,000**
Pike Place Market	Pike Place Market will provide a 20 year lease to Seattle City Light for the first Community Solar Project (30-60 kW in size), valued at $15,000, and permanent signage and/or a kiosk informing visitors about the Community Solar Project, as well including	$25,000	$ -	**$ 25,000**
Contractual Total				**$ 173,800**

***** Northwest SEED fully-loaded project consultant rate is $95/hr and includes salary, employee benefits and taxes, occupancy and utilities, and all other costs. Rates do not include travel or transportation expense.

****** Budget is an estimate based on City Light's previous experience with installations. See Equipment tab for more detail.

Cost Share

Organization/ Source	Type (cash or other)	Cost Share Item	Budget Period 1 Cost Share	Budget Period 2 Cost Share	Total Project Cost Share	
Seattle City Light	Cash and Services	City Light will provide labor to execute this program and contract with Northwest SEED for consulting.	$ 200,000	$ 65,000	$ 265,000	44%
Pike Place Market	Services	PPM will provide the cost of a 20-year lease of their roof, along with signage and publicity for the project.	$25,000	0	$25,000	4%
Northwest SEED	Services	Northwest SEED will donate labor toward the project.	$7,500	$ 2,500	$ 10,000	2%
Total Cost Share		**$ 300,000**	Cost Share Percent of Award:		50%	

Applicant Name: City of Seattle YEAR 1 Award Number:

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Solar Market Transformation	81.117			$267,600	$267,600	$535,200
2.						$0
3.						$0
4.						$0
5. Totals		$0	$0	$267,600	$267,600	$535,200

Section B - Budget Categories

6. Object Class Categories	Grant Program, Function or Activity				Total (5)
	(1) Solar Market Transformation	(2)	(3)	(4)	
a. Personnel	$46,400				$46,400
b. Fringe Benefits	$69,700				$69,700
c. Travel	$6,000				$6,000
d. Equipment	$240,000				$240,000
e. Supplies	$19,000				$19,000
f. Contractual	$154,100				$154,100
g. Construction	$0				$0
h. Other	$0				$0
i. Total Direct Charges (sum of 6a-6h)	$535,200	$0	$0	$0	$535,200
j. Indirect Charges	$0				$0
k. Totals (sum of 6i-6j)	$535,200	$0	$0	$0	$535,200
7. Program Income					$0

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Section C - Non-Federal Resources					
(a) Grant Program		(b) Applicant	(c) State	(d) Other Sources	(e) Totals
8. Solar Market Transformation		$232,600		$35,000	$267,600
9.					$0
10.					$0
11.					$0
12. Total (sum of lines 8 - 11)		$232,600	$0	$35,000	$267,600
Section D - Forecasted Cash Needs					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th quarter
13. Federal	$267,600	$10,000	$10,000	$100,000	$147,600
14. Non-Federal	$267,600	$66,900	$66,900	$66,900	$66,900
15. Total (sum of lines 13 and 14)	$535,200	$76,900	$76,900	$166,900	$214,500
Section E - Budget Estimates of Federal Funds Needed for Balance of the Project					
		Future Funding Periods (Years)			
(a) Grant Program		(b) First	(c) Second	(d) Third	(e) Fourth
16. Solar Market Transformation		$0	$0	$0	$0
17.					
18.					
19.					
20. Total (sum of lines 16-19)		$0	$0	$0	$0
Section F - Other Budget Information					
21. Direct Charges		22. Indirect Charges			

23. Remarks

Applicant Name: City of Seattle YEAR 2 Award Number:

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Solar Market Transformation	81.117			$32,400	$32,400	$64,800
2.						$0
3.						$0
4.						$0
5. Totals		$0	$0	$32,400	$32,400	$64,800

Section B - Budget Categories

6. Object Class Categories	Grant Program, Function or Activity				Total (5)
	(1) Solar Market Transformation	(2)	(3)	(4)	
a. Personnel	$15,900				$15,900
b. Fringe Benefits	$23,200				$23,200
c. Travel	$6,000				$6,000
d. Equipment	$0				$0
e. Supplies	$0				$0
f. Contractual	$19,700				$19,700
g. Construction	$0				$0
h. Other	$0				$0
i. Total Direct Charges (sum of 6a-6h)	$64,800	$0	$0	$0	$64,800
j. Indirect Charges	$0				$0
k. Totals (sum of 6i-6j)	$64,800	$0	$0	$0	$64,800
7. Program Income					$0

Previous Edition Usable

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Section C - Non-Federal Resources					
(a) Grant Program		(b) Applicant	(c) State	(d) Other Sources	(e) Totals
8. Solar Market Transformation		$32,400			$32,400
9.					$0
10.					$0
11.					$0
12. Total (sum of lines 8 - 11)		$32,400	$0	$0	$32,400
Section D - Forecasted Cash Needs					
	Total for Year 2	1st Quarter	2nd Quarter	3rd Quarter	4th quarter
13. Federal	$32,400	$8,100	$8,100	$8,100	$8,100
14. Non-Federal	$32,400	$8,100	$8,100	$8,100	$8,100
15. Total (sum of lines 13 and 14)	$64,800	$16,200	$16,200	$16,200	$16,200
Section E - Budget Estimates of Federal Funds Needed for Balance of the Project					
		Future Funding Periods (Years)			
(a) Grant Program		(b) First	(c) Second	(d) Third	(e) Fourth
16. Solar Market Transformation		$32,400	$0	$0	$0
17.		$0			
18.					
19.					
20. Total (sum of lines 16-19)		$32,400	$0	$0	$0
Section F - Other Budget Information					
21. Direct Charges		22. Indirect Charges			
23. Remarks					

Applicant Name: City of Seattle CUMMULATIVE Award Number:

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Solar Market Transformation	81.117			$300,000	$300,000	$600,000
2.						$0
3.						$0
4.						$0
5. Totals		$0	$0	$300,000	$300,000	$600,000

Section B - Budget Categories

6. Object Class Categories	Grant Program, Function or Activity				Total (5)
	(1) Solar Market Transformation	(2)	(3)	(4)	
a. Personnel	$62,300				$62,300
b. Fringe Benefits	$92,900				$92,900
c. Travel	$12,000				$12,000
d. Equipment	$240,000				$240,000
e. Supplies	$19,000				$19,000
f. Contractual	$173,800				$173,800
g. Construction	$0				$0
h. Other	$0				$0
i. Total Direct Charges (sum of 6a-6h)	$600,000	$0	$0	$0	$600,000
j. Indirect Charges	$0				$0
k. Totals (sum of 6i-6j)	$600,000	$0	$0	$0	$600,000
7. Program Income					$0

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Section C - Non-Federal Resources					
(a) Grant Program		(b) Applicant	(c) State	(d) Other Sources	(e) Totals
8. Solar Market Transformation		$265,000		$35,000	$300,000
9.					$0
10.					$0
11.					$0
12. Total (sum of lines 8 - 11)		$265,000	$0	$35,000	$300,000
Section D - Forecasted Cash Needs					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th quarter
13. Federal	$267,600	$10,000	$10,000	$100,000	$147,600
14. Non-Federal	$267,600	$66,900	$66,900	$66,900	$66,900
15. Total (sum of lines 13 and 14)	$535,200	$76,900	$76,900	$166,900	$214,500
Section E - Budget Estimates of Federal Funds Needed for Balance of the Project					
		Future Funding Periods (Years)			
(a) Grant Program		(b) First	(c) Second	(d) Third	(e) Fourth
16. Solar Market Transformation		$32,400	$0	$0	$0
17.		$0			
18.					
19.					
20. Total (sum of lines 16-19)		$32,400	$0	$0	$0
Section F - Other Budget Information					
21. Direct Charges		22. Indirect Charges			
23. Remarks					